

antheridia and oogonia on different plants are spoken of as "dioecious homothallic" while on page 21 *Phacotus* is described as a "colourless unicell." It is highly doubtful that any motile cells of *Botrydium* have only one flagellum as they are figured in 83b. It is regrettable that Juller's (1937) important work on *Stigeoclonium* is not referred to in the discussion of that genus, nor is it considered in the general discussion of life cycles in the Chlorophyceae.

The last chapters on ecology and geographical distribution of algae represent more or less of an innovation in phycological texts in English, and the author is to be congratulated for having introduced this material as well as a discussion of aspects of algal physiology. Finally, the analysis of the derivation of the generic names of the types described will be a helpful feature to many students.

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FIELD TRIPS OF THE CLUB

TRIPS OF APRIL 26 TO BUSHKILL FALLS, PENNSYLVANIA

Thirteen members and guests of the Torrey Botanical Club gathered at Bushkill Falls in the soft haze of an unusual morning that in its warmth seemed like midsummer, but in its fragrance and in the delicate green tracery of the new leaves it was definitely a morning of early spring. Only the red maples in the low wet grounds and the oaks on the drier hillsides faintly echoed the final fanfare of the reds of autumn in the color of their expanding buds.

The group was honored this year by the presence and participation of Dr. Fulford, who contributed much to the study of the rich Bryophyte flora of this area.

Many of the liverworts and mosses have been found and recorded on previous Torrey Club trips to this region (TORREYA 40: 175-177; 41: 136-137). However, each year additional species are collected, and a thorough search would undoubtedly yield very many more. We had never identified *Frullaria Asagrayana*, with its midrib-like ocelli, before; nor had we ever noticed the common *Chiloscyphus rivularis*, which was growing in great abundance in one of the small tributary streams. Not far away, also flourishing,

was *Jubula pennsylvanica*, coating the rocks of dark green. On the sides of the main gorge, we had never seen the tiny *Lejeunea patens*, the only slightly more conspicuous *Leucolejeunea clypeata*, nor *Jungermannia pumila*. Directly opposite the main falls there were miniature forests of *Pellia* sporophytes, their translucent stalks glistening in the sunlight.

Antheridial receptacles of this year were well along on *Marchantia*, but only archegoniophores of last year were in evidence, somewhat the worse for wear.

Coptis trifolia, the Gold-thread, in flower, added its cheerful touch to the dubious marshes, and the Fringed Milkwort was also seen in bloom again.

Ceratodon purpureus, like other birds of passage, was roosting in a burned over, waste spot.

On one of the drier hillsides, close to the path, *Buxbaumia aphylla* was growing more plentifully than we have ever seen it, while in the brook below, the giant water moss, *Fontinalis gigantea*, was still prospering, regardless of priorities.

The drive back through the village of Shawnee and the beautiful valley of the Delaware led past apple and pear trees in full flower and young grain fields in new green. It was still, on this Sunday afternoon, a valley at peace in a world at war.

EDWIN B. MATZKE

TRIP OF JUNE 13, 1942, TO ENGLEWOOD CLIFFS, N. J.

This Saturday afternoon trip covered a good botanizing region only a half-hour's bus ride from New York. Many of the common plants of late spring and early summer, and numerous trees, shrubs, and ferns were pointed out in relation to their varied habitats of cliffs, open fields, woods, and swamps. Also some notes were made concerning the geology of the region.

MARY HOLTZOFF

TRIP OF JUNE 12-13 TO LAKE SHEHAWKEN, PA.

This trip eventuated under several disturbing circumstances, principally an unusually hot and humid Saturday, followed by a rainy Sunday. The tour on Saturday took the party into Scott Township about four miles north of Lake Shehawken. Among the more inter-

esting northern plants observed were *Lycopodium annotinum*, *L. tristachyum*, *Polystichum Braunii* var. *Purshii*, *Eriophorum callithrix*, and *Cornus canadensis*. A short side excursion was made to see a field blue with blossoms of *Scabiosa arvensis*. Another walk provided an infinite number and variety of *Botrichium matricariaefolium* and *B. lanceolatum* var. *angustisegmentum*. Collections were made of *Polygonum natans* var. *Hartwrightii* (not in flower), *Potentilla palustris* and *Salix lucida*. The locality for *Cetraria islandica* was also visited.

With the help of Mrs. Rodda of Palmerton, Pa., about sixty species of birds were observed, among which were the Black-throated Blue, Black-throated Green, Canadian, Blackburnian, and Magnolia warblers, the Water Thrush, and the Veery and Hermit thrushes. In one field was observed an unusual number of Henslow sparrows, and one in particular which sat and sang (?) from the roadside fence within a few feet of our car till we drove away and left him still singing.

Besides the leader, the party comprised Mr. and Mrs. Rodda and Mr. and Mrs. Hand of Philadelphia, Pa. A return visit under a more favorable star is hoped for at a near opportunity.

W. L. DIX

TRIP OF JUNE 20, 1942, TO BRANCH BROOK PARK, NEWARK, N. J.

Mr. Carl P. Witte, Horticulturist of the Essex County Park Commission, accompanied the group through the Park telling the people something about the plants of the Park and naming some of the trees and shrubs for those interested. Dr. P. P. Pirone, Research Specialist at the N. J. Agricultural Experiment Station, pointed out a number of pathological conditions and gave us much new information about the care and maintenance of shade trees. Those participating were unanimous in declaring it an afternoon spent to a pleasant and profitable advantage. Leader, Dr. Pirone. Attendance, ten from Newark Museum Nature Club and Torrey Botanical Club.

EDWARD B. LANG

TRIP OF JUNE 20, 1942, TO THE FERN GARDEN OF MR. AND MRS.
W. HERBERT DOLE

The eighty-odd ferns and fern allies in this garden were temporarily marked so that each species could be easily found and identified. Most of the ferns in the garden have been growing here from ten to twenty years and are well established and appear happy in their present positions. A number are of recent introduction and have been tried out for only a year or two. Several southern species were planted only this spring and may prove unsuitable for this latitude. The only way to settle that question seems to be to try growing them.

My ferns all came through the winter in good condition, though some species are always slow to start growth in the spring. Ferns are more liable to damage by wind during the winter than by low temperatures, and it has been found advantageous to protect those in exposed locations with small branches anchored with pegs or stones to prevent dislodgment. All are lightly covered with dry leaves, except of course the larger local ferns which require little attention.

The *Cheilanthes lanosa* on the limestone ledge in an exposed position in full sun most of the day is still in fine condition and shows considerable increase. From one small clump planted about ten years ago there are now five clumps each larger than the original, notwithstanding that a number of these ferns have been given to other fern gardens. *Woodsia ilvensis*, also on the limestone in part shade, after six or seven years is still in a very thrifty condition. The *Polystichums*, set out in 1940 and given no special winter protection, are still doing well. These include *P. andersoni*, *P. plumosum compactum*, *P. aculeatum plumosum* (?) and *P. viviparum* (said to be a West Indian fern). *P. lonchitis*, set out several years ago, survived several winters then disappeared.

The Florida shield fern (*Dryopteris ludoviciana*) appears to be hardy here. It has gone through three winters and shows increase by offsets. *Dryopteris celsa* and *D. chinensis* set out a year ago are growing nicely. The latter fern is especially attractive with its finely cut lacy fronds. Several specimens of Scott's spleenwort (Alabama type) set out last year have developed new fronds and appear in good condition. The same is true of *Asplenium pinnatifidum* planted

in a low wall of brown sandstone. *Cystodium falcatum*, the holly fern which I have mentioned several times in previous years, still attracts attention with its shiny bright green fronds and exotic appearance. The alpine lady fern, *Atherium alpestre* var. *americanum*, collected on Mt. Rainier and sent to me several years ago, appears perfectly happy in its new habitat and has increased to several good sized clumps. *Blechnum spicant* (Deer fern) has again developed fertile fronds; last year there were only sterile fronds on this northwestern fern. The small "Mexican deer fern" which was sent to me last year went through the winter without any protection and is now larger than when it was received.

The afternoon provided ideal weather conditions and those who came remained until late afternoon sitting in the shade to discuss ferns and partake of refreshments provided by Mrs. Dole. Attendance 9.

W. HERBERT DOLE

PROCEEDINGS OF THE CLUB

MINUTES OF THE MEETING OF APRIL 15, 1942

The meeting was called to order at 3.30 p.m. by the second vice-president, Dr. Chandler, in the Members' Room of the New York Botanical Garden. Twenty-eight members and friends were present.

The minutes of the preceding meeting were accepted as read.

The first portion of the scientific program was an illustrated report by Mr. Libero Ajello on a New Chytrid Genus, *Polychytrium*. The Speaker's abstract follows.

Polychytrium aggregatum is a new, polycentric, saprophytic species of the family Cladochytriaceae which occurs in the decaying vegetation of bogs in the ridges of Bearfort Mountain, Passaic County, New Jersey. It has a coarse, richly branched rhizomycelium which becomes yellowish-brown at maturity, and lacks spindle organs or intercalary enlargements. The sporangia are smooth or tuberculate and produce spherical, posteriorly uniflagellate zoospores which lack a conspicuous refractive globule but include a prominent opaque lunate body. The sporangia dehisce by the deliquescence of the tip of the exit tube or papilla. Dormant thick-walled resting spores have not been observed, but the irregular tuberculate yellowish-brown sporangia are strikingly similar to the resting spores of many Cladochytriaceous species. However, they produce zoospores directly without going through a dormant period.